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ABSTRACT

The importance of research in literacy is that it provides some routes to greater efficiency in literacy provision. Research from the past shows how important reading and writing have been over the centuries. Literacy was often invested with social and moral power as well, and religious literacy was the predominant form of reading and writing from before the time of the ancient Greeks through the Middle Ages. Some theories of literacy link the industrial revolution to the increase in literacy of the period, but others dispute this assertion. Mass literacy programs or campaigns have also been a focus of recent historical inquiry--showing that literacy campaigns never take place in cultural and historical isolation. Social science research today has grown tremendously. This research has raised four main issues that are likely to be investigated often in the years to come: (1) defining and redefining literacy; (2) the acquisition of literacy; (3) retention of literacy; and (4) individual and social consequences of literacy. Future research is likely to focus on adult literacy campaigns, the advent of universal primary education, and changing levels of literacy requirements. (KC)

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LITERACY LESSONS

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INTERNATIONAL LITERACY YEAR

Literacy and research: past, present and future

by Daniel A. Wagner

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LITERACY AND RESEARCH: INTRODUCTION

When the word 'research' is affixed to a topic of public concern, there is sometimes reaction protesting 'let's get on with the job' and not waste time and resources on more 'studies that lead nowhere.' This kind of sentiment is strongly manifested in the field of literacy work. The problems associated with illiteracy and low-literacy exist on such a vast scale that we may be tempted to commit all available resources to reaching out to the needy. While such a reaction is understandable, it is unlikely that this way of thinking will be as useful as its advocates might suggest. Indeed, social programmes in the twentieth century have been fraught with failure or at least low rates of success. Reaction to such failures often leads, in turn, to reduction of funds because a given social programme 'didn't work well,' and a tendency to move on to a completely new approach to the social problem.

The effort to reduce illiteracy is no exception. While we are beginning to better understand the causes and consequences of literacy and illiteracy, there is much more that needs to be known. Since there exists a great variety of literacy programmes for an even larger number of sociocultural contexts, it should come

- *How effective are literacy campaigns?*
- *What is the importance of political and ideological commitment?*
- *Should writing and reading be taught together or separately?*
- *Should literacy programmes include numeracy as well?*
- *Is literacy retained following a limited number of years of primary schooling or short-term campaigns?*
- *How important is literacy for the workplace?*
- *Is it important to teach literacy in the individual's mother tongue?*

as no surprise that the effectiveness of literacy programmes has come under question, not only among policy makers and specialists, but also among the larger public.

The questions highlighted above, and similar ones – so central to the core of literacy work around the world – remain without definitive answers, in spite of the occasionally strong rhetoric in support of one position or another.

> *Basic and applied research, along with effective programme evaluation, are capable of providing critical information that will not only lead to greater efficiency in particular literacy programmes, but will also lead to greater public support of literacy programmes in these contemporary times of economic constraints.*

LESSONS FROM THE PAST: WHAT LITERACY RESEARCH TELLS US ABOUT PRE-MODERN TIMES

While a complete review of the history of literacy is well beyond the scope of this short discussion, it is useful to highlight some relevant areas. Turning points in the production of literate materials – from the Dead Sea Scrolls to the Gutenberg Bible to the word processor – have served as important markers of social and cultural change. Conversely, historical changes in society have played major roles in the popular use of literate materials. What is most impressive in historical accounts of literacy is the importance that reading and writing – often as separate activities – have been given over the centuries. That clergymen of many of the world's great religions were also the possessors of one or both of these skills signifies not only the sometimes 'restricted' nature of literacy, but its social and moral power as

well. Clearly, what might be termed 'religious literacy' was the predominant form of reading and writing activity from before the time of the ancient Greeks through the Middle Ages. The history of literacy parallels, and has been implicated in, many of the great changes in social history, such as religion, public schooling, the establishment of democracy and even social (and socialist) revolutions.

Recent efforts to link the rise of mass literacy with economic development during the industrial revolution in Europe and in later decades have become a matter of increasing debate within the research community. It had long been accepted that the rise in literacy and educational level was a basic cause of economic growth. Current research seems to contradict such an assertion by demonstrating that some countries, such as Sweden, had high literacy rates well before the industrial revolution. Conversely, the United Kingdom had rather low rates of literacy even during periods of rapid economic growth, and increased education and literacy was made possible by the growth of technology which allowed more time for the schooling of children.

Mass literacy programmes or campaigns have also been a focus of recent historical inquiry. For example, the Soviet literacy campaign, which became well known in the post-revolutionary period, actually began with the so-called 'peasant initiative' in the 1860s. The popularity of literacy classes increased to the extent that, by the 1890s, literacy classes were more widely available than public schooling, prompting widespread fear in educated circles about the untoward consequences of 'unschooled literacy'. We see in such reports that pre-revolutionary Russia was already making important gains in reducing illiteracy, well before the famous 1919 'Decree on Illiteracy' – which required all citizen from age 8 to 50 to become literate. From the Soviet case, we are now beginning to under-

stand that literacy campaigns never take place in cultural and historical isolation.

Literacy in a historical perspective can tell us a great deal about the causes and consequences of the written word, and can help us to avoid some of the pitfalls which continue to hamper literacy work in the present.

LESSONS FROM THE PRESENT: WHAT WE KNOW ABOUT LITERACY IN CONTEMPORARY TIMES

Naturally, one of the key differences between looking back historically and conducting research in the present is that the former is based primarily on old and sometimes unreliable or even biased written records, while the latter is much easier to reconfirm by conducting new research. Of course, nothing prevents a contemporary piece of research from being inaccurate, unreliable or even biased; however, other researchers have a much better chance of confirming its credibility in the present than in the past. In addition, it is also the case that the sheer volume of social science research on literacy has grown tremendously over the past several decades.

A great many new books and journals have appeared, sometimes to the extent of distressing the interested observer, who will find that literacy is now dealt with by specialists who might focus their efforts uniquely on spelling, on campaigns, on alphabetic reform, on computer word processing and so forth. Specialization is a sign that a field of inquiry has come of age, and there is no longer any doubt that this is the case for literacy.

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Within this increased context of specialization, how might we think about key trends in research work as applied to literacy? Below we list four general domains in literacy work, with a brief description of the nature of the problem and how research has led to improved understanding. These are issues that are likely to be the subject of greater attention in the coming years.

Defining and redefining literacy

With the multitude of experts and published books on the topic, one would suppose that there would be a fair amount of agreement as to how to define the term 'literacy'. On the one hand, most specialists would agree that the term connotes aspects of reading and writing; on the other hand, major debates continue to revolve around such issues as what specific abilities or knowledge count as literacy, and what 'levels' can and should be defined for measurement. Thus, Unesco has often used the term 'functional literacy', as originally defined in 1956:

> *'A person is functionally literate when he has acquired the knowledge and skills in reading and writing which enable him to engage effectively in all those activities in which literacy is normally assumed in his culture or group.'*
>
> Gray, W.S. *The teaching of reading and writing.* Paris, Unesco, 1956. (Monographs on fundamental education, X).

While functional literacy has a great deal of appeal because of its implied adaptability to a given cultural context, the term can be very awkward for research purposes. For example, it is unclear in an industrialized nation such as the United Kingdom what level of literacy should be required of all citizens; does a coal miner have different needs than a barrister? Similarly, in a Third World country, does an illiterate woman need to learn to read and write in order to take her prescribed

medicine correctly, or is it more functional (and cost-effective) to have her school-going son read the instructions to her? The use of the term functionality, based on norms of a given society, is inadequate precisely because adequate norms are so difficult to establish.

What might, then, be an adequate definition of literacy for today's world? A reasonable approach is that suggested by Unesco in 1957:

> *'... (L)iteracy is a characteristic acquired by individuals in varying degrees from just above none to an indeterminate upper level. Some individuals are more literate or less literate than others, but it is really not possible to speak of literate and illiterate persons as two distinct categories.'*

Since there exist dozens of orthographies for hundreds of languages in which innumerable context-specific styles are in use every day, it would seem ill-advised to select a universal operational definition. Attempts to use newspaper reading skills as a baseline may seriously underestimate literacy if the emphasis is on comprehension of text (especially if the text is in a national language not well understood by the individual).

At least part of the controversy over the definition of literacy lies in how people have attempted to study literacy in the first place. The methodologies chosen, which span the social sciences, usually reflect the disciplinary training of the investigator. Thus, we find that anthropologists provide in-depth ethnographic accounts of single communities, while trying to understand how literacy is woven into the fabric of community cultural life. Little or no attempt is made at quantifying levels of particular literacy abilities. By contrast, psychologists and educators have typically chosen to study measurable literacy abilities using tests and questionnaires. It is clear that a broad-based conception of literacy is required not only for a valid understanding of

the term, but also for developing appropriate policy actions.

Because literacy is a cultural phenomenon – adequately defined and understood only within that culture in which it exists – it is not surprising that definitions of literacy may never be permanently fixed. Whether literacy includes computer skills, mental arithmetic or civic responsibility will depend on how the public and political leaders of each society define this most basic of basic skills. Researchers can help in this effort by trying to be clear about which definition or definitions they choose to employ in their work.

Acquisition of literacy

The study of literacy acqusition appears to be heavily influenced by research undertaken in the industrialized world. Much of this research has centred on the acquisition of reading and writing skills, with an emphasis on the relationship between cognitive skills, such as perception and memory, and reading skills, such as decoding and comprehension. This work has been carried out mainly with school-aged children, rather than with adolescents or adults.

> *Surprisingly little research on literacy acquisition has been undertaken in the Third World, and most has typically focused on adult acquisition rather than on children's learning to read. This latter phenomenon appears to be a result of the emphasis by Western and international organizations to promote adult literacy in the developing world, while usually ignoring such problems in Western societies.*
>
> Unesco. *World illiteracy at mid-century: a statistical study.* Paris, Unesco, 1957. (Monographs on fundamental education, XI).

Despite these gaps in the research literature, some synthetic statements may be proposed as to how literacy is acquired across different societies. More than a decade ago Downing published *Comparative reading*,

which surveyed the acquisition of reading skills across different languages and different orthographies. We know that mastery of the spoken language is a typical prerequisite for fluent reading comprehension in that language, though there exist many exceptions.

A consensus on the issue of reading abilities is important, since there are also those who would suggest that literacy is more like language in the sense that specific abilities do not need to be learned, but the individual must be able to interact with a 'literate environment' in order to acquire literacy. This latter approach stems in part from the popular perception of a high correlation between literacy in parents and their children. It is likely that literate parents provide a variety of opportunities for children to learn to read. In both the industrialized and developing countries, research has shown that parents who provide stimulating learning environments for their children – including activities such as storybook reading – have produced children with considerably better reading achievement in school.

In a different research approach, some specialists have stressed the importance of class structure and ethnicity/race as explications of differential motivation among young literacy learners. It has been claimed, for example, that many minority children in America (constituting what is sometimes called the 'Fourth World') are simply unmotivated to learn to read and write in the cultural structure of the school. This approach to understanding social and cultural differences in literacy and school achievement has received increased attention in that it avoids blaming the child for specific cognitive deficits, while focusing attention more on changes in the social and political structure of schooling.

Finally, and until fairly recently, it has been assumed that learning to read in one's 'mother-tongue' or first language is always the best educational policy for literacy provision, whether for children or adults. Based on

some important research studies undertaken in the 1960s, it has generally been assumed that individuals who have had to learn to read in a second language are at a disadvantage relative to others who learn in their mother-tongue. While this generalization may still be true in many of the world's multilingual societies, more recent research has shown that there may be important exceptions. In one such study, it was found that Berber-speaking children who had to learn to read in Standard Arabic in Moroccan schools were able to read in fifth grade just as well as children who were native speakers of Arabic. Adequate research on non-literate adults who learn to read in a second versus a first language has yet to be undertaken.

In sum, considerable progress has been made in understanding the acquisition of literacy in children and adults, but primarily in industrialized societies. Far less is known about literacy acquisition in a truly global perspective, and in multilingual societies. Since the bulk of non-literate people live in these areas of the world, there is much more that needs to be known if we are to improve literacy provision in the coming decades.

Retention of literacy

The term educational 'wastage' is common in the literature on international and comparative education, particularly with respect to the Third World. This term typically refers to the loss, usually by dropping out, of

The issue of literacy retention is crucial here, for it is not actually the number of school leavers or graduates that really matters for a society, but rather what they learn and retain *from their school years, such as literacy skills. When students drop out of an educational programme, a society is wasting its resources because those individuals will not reach some presumed threshold of minimum learning at which what has been acquired will not be lost.*

children who do not finish what is thought to be the minimum educational curriculum of a given country (often five to eight years of primary school). The concept of wastage refers to those children for whom an economic investment in educational resources has already been made, but who, literally, waste that investment by not completing the appropriate level of studies.

Retention of learning (or literacy, in particular) is a key goal of educational planners around the world. As yet only a small number of research studies have been published on this question; some results show that there is a 'relapse' into illiteracy for those who have not received sufficient instruction, while others demonstrate no serious loss. At present, there is so much variability in these studies that we can conclude very little about what might be termed the 'trajectory' of literacy ability, once it has been acquired to varying degrees. This is as complex a topic as acquisition of literacy, because the same sorts of localized societal and cognitive factors intervene in the retention process.

- What are the effects of practice on literacy ability?
- What type of materials, what type of motivation, and how many years are required to retain fluent or partially fluent reading and writing?
- In what types of schools and programmes?
- Do short-term literacy campaigns have the same retention effects as the longer-term process of formal schooling? Such questions provide a rich and important area of inquiry, and one that will be essential as ever greater numbers of children and adults receive modest levels of literacy, and as governments move toward the universalization of basic education for all citizens.

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Individual and social consequences of literacy

The dual rationale for literacy programmes is that they result in substantial good, both for the individual and for the larger society. In the case of the former, it is usually said that employment, self-defense and cultural enrichment are among the numerous individual consequences of literacy. What does research tell us about this?

Many assume, for example, that literacy is a key factor in employment in the world's modernizing and increasingly technological economies. While few would dispute the need for literacy in this context, it is far less clear that basic reading and writing skills are sufficient to obtain employment in the modern sectors of many societies. Indeed, recent research emphasizes the need for more advanced skills in problem-solving and analytic thinking than for basic reading and writing.

And in Third World societies it is increasingly common for those with a primary or secondary school education to find themselves excluded from white collar jobs which were once guaranteed for the literate. As basic literacy becomes a commodity more widely available, its 'purchasing power', so to speak, is diminished. This consequence does not necessarily reduce other benefits of literacy – such as reading for enjoyment – but it has resulted, in countries like the United States, in an increase in high school dropouts.

Let us now look at the argument for the social consequences of literacy. Since the Second World War, perhaps the most compelling argument for human resources development is that literacy will lead to economic growth in countries which are able to make a sufficient investment. This approach, sometimes referred to as investment in human capital, supported the hypothesis that a minimum 40% adult literacy rate would be required for economic growth. Naturally, this type of claim made use of aggregated data across many

countries of the world, based on a significant correlation between GNP and literacy rates. Of course, one would probably be just as correct in claiming that literacy rates, like infant mortality rates, are prime indicators of the degree of economic development in most countries. If social and economic progress are being attained, then one usually finds that literacy rates climb and infant mortality rates drop.

Thus, it would seem that the intellectual tide is turning against those who have argued that universal literacy would have immediate and important economic outcomes. Increasing numbers of policymakers in the area of educational planning are wondering if nations can bear the burden of ever-expanding educational costs with fixed or lowered economic resources. Nonetheless, the association of literacy with health, nutrition and other social goods is such that it is unlikely that governments will cease efforts at universalizing literacy and primary education. Moreover, high rates of literacy have taken generations to achieve.

Literacy certainly brings individual and social benefits, but these benefits are not distributed evenly in all societies. What seems certain is that a minimum level of literacy would be useful for individuals in every society, but that even such minimum levels are not sufficient for guaranteed social and economic outcomes. Research in this area can be particularly useful for literacy learners and for policymakers.

WHAT NEXT?: SOME GUESSES ABOUT LITERACY AFTER THE YEAR 2000

If present trends continue, particularly with the universalization of primary schooling, the world of illiteracy will continue to diminish over the next century. Indeed, the number of 'naive' illiterates – those with no knowledge that literacy exists and with no knowledge of the uses of literacy by others – is dwindling as we approach the year 2000. Of course, as many observers have noted, the absolute numbers of individuals with low literacy skills (e.g. with only a few years of primary schooling) continues to increase in many parts of the world.

One major implication for the future is that policy attention will focus less on providing minimal literacy skills than on which kinds *and what* levels *of literacy skill are required for each society.*

Some obvious examples are now present in industrialized countries where basic arithmetic skills have been substantially replaced by the handheld calculator. Even spelling skills are beginning to reflect the effects of spelling-checking computers for children. While there is still debate among researchers on this issue, the advent of high technology is compelling social change even before specialists have engaged in the requisite research.

The provision of adult literacy services is another area that appears ripe for major changes. During the twentieth century, many of the most widely known adult literacy programmes were undertaken in the form of 'campaigns', large scale efforts undertaken over a relatively short period of time, often under revolutionary conditions (e.g. U.S.S.R., China, Cuba,

and Ethiopia). While there remains some uncertainty as to the actual outcomes of such efforts, the advent of universal primary education, the relative scarcity of contemporary social revolution, and the decreased need for a fixed minimum level of literacy among adults...

> *... would lead one to predict that adult literacy campaigns are unlikely to be a major vehicle for literacy provision in the coming century. Much more likely would be public or private programmes designed for the provision of specific type of skills, in areas such as microcomputers, word processing, data management and analytic thinking.*

Of course, reading the future (another literate metaphor) is inherently more difficult than reading the present, that is, doing research in contemporary societies.

CONCLUSIONS

> *If you don't know where to go, any road will take you there.*
> (Anonymous)

The importance of research in literacy is that it provides some routes to greater efficiency in literacy provision. While no social programme, including research, is without economic costs, such expenditures must be understood in light of the costs involved in not knowing which way to go. Those who have argued that the literacy crisis is so mammoth that money spent on research is somehow wasteful are clearly wrongheaded in this regard. To invest resources in implementation

without developing the means to learn from such programmes is to increase the likelihood that any perception of lack of success will be interpreted as such by planners and decision-makers.

As with all kinds of research, literacy research can only provide evidence in support of better ways of conceptualizing literacy work. Given the tremendous variety of contexts for literacy in the cultures of the world and the hindsight of history, the only certainty in research is that there will never be complete certainty in our understanding of literacy. This observation should reinforce efforts to include applied research and evaluation in all literacy activities, since they are always undergoing change. Progress in this domain can only be made in the context of a greater understanding of this complex phenomenon we call literacy.

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